CLAIMS:

1. A deposition system for oblique deposition comprising:

a source of vaporized species traveling at a first distribution of angles surrounding an oblique angle θ measured relative to a surface normal of a substrate;

a shadow mask including at least one aperture located between the source and a substrate wherein the shadow mask intercepts a portion of the vaporized species traveling at the first distribution thereby limiting the vaporized species passing through the aperture to traveling at a second distribution of angles surrounding an oblique angle θ; and

the substrate contacted by the second distribution of vaporized species, the species forming a tilted thin film on the substrate.

2. The deposition system of claim 1 wherein the source of vaporized species is a physical vapor deposition source.

3. The deposition system of claim 1 wherein the oblique angle θ is greater than 35° and less than 90°.

4. The deposition system of claim 1 wherein the oblique angle θ is greater than 55° and less than 75°.

5. The deposition system of claim 1 wherein the shadow mask limits the vaporized species traveling through the aperture so as to organize the angles of the vaporized species thereby forming a tilted thin film having azimuthal symmetry.

6. The deposition system of claim 1 wherein the shadow mask limits the vaporized species traveling through the aperture so as to organize the angles of the vaporized species into a circumferential pattern.

7. The deposition system of claim 1 wherein the shadow mask limits the vaporized species traveling through the aperture so as to organize the angles of the vaporized species into a radial pattern.

8. The deposition system of claim 1 wherein the aperture has width and the width is non-constant from a first end to a second end.

9. The method of claim 1 wherein the substrate is a circular disc for a recording media.

10. The deposition system of claim 1 wherein the shadow mask has at least two apertures.

11. A method for oblique deposition onto a substrate, the method comprising:

directing vaporized species toward a substrate at a distribution of angles of incidence about angle θ measured relative to a surface normal of the substrate; and

narrowing the angular distribution.

12. The method of claim 11 wherein the distribution of angles of incidence is narrowed by permitting only a portion of the vaporized species traveling at approximately angle θ to pass through an aperture in a shadow mask and deposit on the substrate.

13. The method of claim 11 wherein the distribution of the angles of incidence is narrowed by intercepting a portion of the vaporized species not traveling at about angle θ, wherein the species are intercepted with a shadow mask.

14. The method of claim 11 comprising the additional step of rotating the substrate while depositing the vaporized species on the substrate.

15. The method of claim 14 comprising the additional step of forming a single continuous film of the vaporized species wherein the angles of incidence of the vaporized species are organized into azimuthal symmetry.

16. The method of claim 14 comprising the additional step of forming a single continuous film of the vaporized species wherein the angles of incidence of the vaporized species are organized into a circumferential pattern.

17. The method of claim 14 comprising the additional step of forming a single continuous film of the vaporized species wherein the angles of incidence of the vaporized species are organized into a radial pattern.

18. A shadow mask for oblique deposition by physical vapor deposition onto a substrate, the shadow mask comprising a slot aperture, the slot aperture having generally radial direction relative to a circular substrate.

19. The device of claim 18 wherein the aperture has width and the width is non-constant from a first end to a second end.

20. The shadow mask of claim 18 comprising a plurality of slot apertures separated by walls adjacent to the shadow mask.